

REMARKS

This application has been reviewed in light of the Office Action dated December 15, 2004. In view of the foregoing amendments and the following remarks, favorable reconsideration and withdrawal of the rejections set forth in the Office Action are respectfully requested.

Claims 1 and 3-21 are pending. Claim 2 has been canceled, without prejudice or disclaimer of subject matter. Claims 1, 3-14, 16 and 17 have been amended. Claims 18-21 have been added. Claims 1, 12 and 18 are in independent form.

Initially, Applicants note with appreciation that Claims 2-4, 6-10, 15 and 17 have been indicated as allowable if rewritten so as not to depend from a rejected claim and, in the case of Claim 6, to overcome the rejection under 35 U.S.C. § 112, second paragraph (discussed below).

(In that regard, Applicants understand that Claim 4 contains allowable subject matter. While that claim was not listed on the Office Action Summary Sheet or in the “Allowable Subject Matter” section of the Office Action (page 10), it was not rejected over the prior art and it was listed in the “Reasons for Indicating Allowable Subject Matter” section (at page 11).)

Applicants note the Examiner’s explanation of the reasons for indicating allowable subject matter. In that regard, Applicants note that the features of Claim 2 were not correctly stated in that explanation. Specifically, a portion of the claim after “regarding a wall surface of said second bubbling chamber” was omitted in the explanation. In that regard, it is noted, for example, that Claim 2 (as originally filed) recited that “a sectional area . . . is changed

continuously” Nevertheless, Applicants respectfully submit that Claim 2 as originally filed contained allowable subject matter in virtue of its combination of claimed features.

Claims 1-11 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The claims have been amended in view of the points raised by the Examiner hereunder. Applicants submit that the all of the pending claims comply with Section 112. Accordingly, withdrawal of this rejection is respectfully requested.

Independent Claim 1 has been amended to incorporate the subject matter of Claim 2 (see penultimate paragraph of Claim 1). Accordingly, in view of the Examiner’s indication of allowable subject matter, independent Claim 1 and dependent Claims 3-11, which depend from Claim 1, are believed allowable. It is noted that some other changes were made to Claim 1 to improve its form, but these changes are not believed to affect its patentability.

Claims 12-14 and 16 were provisionally rejected for obviousness-type double patenting over claims 1-6 of application no. 10/615,143. Since Applicants believe that the instant Amendment overcomes all other outstanding rejections of the claims, it is requested that this double patenting rejection be withdrawn. M.P.E.P. 804.I.B. Accordingly, Claims 12-14 and 16, as well as Claims 15 and 17, which depend from Claim 12, are believed allowable.

Independent Claim 18 recites, *inter alia*, wherein a cross-sectional area of a first bubbling chamber, taken in a plane parallel to a main surface of an element substrate, is larger than a cross-sectional area of a second bubbling chamber, taken in a plane parallel to the main surface of the element substrate, and the cross-sectional area of the second bubbling chamber, taken in the plane parallel to the main surface of the element substrate, is larger than a cross-sectional area of a discharge port portion, taken in a plane parallel to the main surface of

the element substrate; wherein each of (a) a connecting portion between a side wall surface of the first bubbling chamber and a side wall surface of the second bubbling chamber and (b) a connecting portion between a side wall surface of the second bubbling chamber and a side wall surface of the discharge port portion has a stepped portion; and wherein the side wall surface of the second bubbling chamber has a tapered shape such that an end portion of the side wall surface of the second bubbling chamber at the discharge port portion is smaller than an end portion of the side wall surface of the second bubbling chamber at the first bubbling chamber. Applicants submit that the cited art does not teach or suggest at least these features of Claim 18. Accordingly, Claim 18 is believed allowable over the cited art.

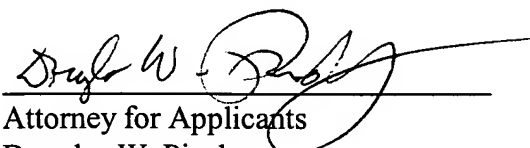
A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the cited art, against independent Claim 18. That claim is therefore believed patentable over the art of record.

Each of dependent Claims 19-21 depends from independent Claim 18 and is therefore believed patentable for at least the same reasons as pertain to that claim. Since each of these dependent claims is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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